152

1   MR. CERESNEY: Hold on. Why does it

2   matter to him? Why -- I mean, I'm just --

3   I'm --

4   MS. WAXMAN: That's fine. Thank

5   you.

6   Q   Why does it matter to Ripple Labs

7   who created XRP? Why are they stating in

8   Exhibit 79 "Ripple did not create XRP"?

9   MR. CERESNEY: If you know.

10   A   I'll tell you -- I'll tell you what

11   I do know to the extent that I know it. We

12   stated simply and factually a long time ago

13   that the ledger preexisted the company. It

14   was one of the conditions of the formation of

15   the company that we have a functional ledger.

16   Then people, for some reason, just started to

17   dispute that. We had no choice but to sort of

18   defend the position. It just became a point

19   of contention.

20   Q   Did you ever discuss with anyone

21   that Ripple did not want to be identified as

22   the issuers of XRP?

23   A   I had a conversation about that with

24   Chris Larsen. We were concerned about the von

25   NotHaus decision, where he was convicted of

153

1   essentially counterfeiting. And there was a

2   concern that if the company had been the

3   creator or the issuer of the tokens, that that

4   might create liability for the company or the

5   stockholders because they might be deemed

6   counterfeit under federal law.

7   That was one of the reasons why it

8   was important to us at the time that the

9   tokens predate the company and that the

10   company not be the creator or the issuer of

11   the tokens but a new user of them.

12   Q   I'm not familiar with that case.

13   Can you tell me more about it?

14   A   I'll tell you what I recall. And

15   obviously you can look it up and get the

16   precise details. But a man named Bernard von

17   NotHaus was charged essentially with

18   counterfeiting. For creating, I think it was

19   the Liberty Dollar or something similar.

20   And a lot of people in the

21   cryptocurrency community -- this case was

22   announced, I think in early or mid-2012. And

23   a lot of people in the cryptocurrency

24   community were concerned because it uses the

25   word coins and -- it was like a matter of

154

1   interpretation. Does that just mean physical

2   metal or could that refer to electronic

3   tokens? Were these illegal under federal law?

4   We didn't want the company or the

5   investors to have that risk. And so the

6   founders agreed that they would be the ones

7   who took on the creation and the issue of the

8   tokens and gifting them to the company. And

9   that made it a hard requirement that we have a

10   functional ledger before we could go to

11   investors in that second round to sort of

12   create a company. That was the concern at

13   that time.

14   Q   Was there a concern under the

15   Federal Securities laws?

16   A   At that time, I think if you'd asked

17   us to list all of our concerns, it would have

18   appeared on the list. But it wasn't -- I

19   would not have characterized it as a

20   significant concern at the time.

21   Q   But it was one of the risks?

22   A   Yes.

23   Q   It was one of the risks that -- it

24   was one of the reasons why you wanted the

25   ledger to predate the company?

1   A   I don't know that --

2   MR. CERESNEY: He -- hold on. He

3   didn't say that. But go ahead and answer.

4   A   I don't believe -- I don't think

5   we -- I don't think we considered that those

6   two things -- I don't have any recollection of

7   ever considering them in connection. And I

8   don't think we would have at the time. I

9   don't think we considered that particular risk

10   significant enough to warrant that type of --

11   that type of step. And I don't recall us ever

12   having advice from counsel to suggest that --

13   MR. CERESNEY: I --

14   THE WITNESS: I shouldn't.

15   MR. CERESNEY: You shouldn't. Stop.

16   A   But I don't believe there was a

17   cause and effect relationship between those

18   two things.

19   Q   Can you just tell me again why --

20   the creation of the ledger -- why it was

21   important to have the ledger created earlier

22   on before the formation of the company.

23   A   My recollection at the time was that

24   Chris Larsen and I had a conversation about

25   the legal status of the -- legal status of the

156

1   tokens. And our primary concern was that the

2   tokens might be deemed like counterfeit coins

3   under U.S. law. We felt one of the ways to

4   mitigate that would be to ensure that the

5   company didn't launch until the ledger was

6   functional. That's why it was so -- it's one

7   of the reasons it was so important to us to

8   have a functional ledger and that the tokens

9   were issued and distributed prior to the

10 formation of the company. So that the company

11 couldn't be characterized as the creator or

12 issuer of the tokens.

13   MR. DANIELS: I think you said it

14 was important to have the tokens issued and

15 distributed prior to the formation of the

16 company; is that right?

17   THE WITNESS: Yes.

18   MR. DANIELS: In the agreement that

19 we are looking at with Arthur Britto, it talks

20 about the anticipated distribution of the

21 tokens; is that correct?

22   THE WITNESS: I see it says, "It is

23 anticipated that a total of a hundred billion

24 credits shall be recorded on the official

25 ledger."

1   MR. DANIELS: And this is talking

2 about, at least in the context of Britto, that

3 two percent is going to be distributed to him.

4 At a certain point in the future, there will

5 be a distribution of these tokens; is that

6 right?

7   THE WITNESS: I think there was no

8 need to make the agreement with respect to --

9 with resect to distributions that had already

10 taken place. I believe the concern with this

11 was more about subsequent distributions, that

12 if, for example, the company abandoned the

13 existing ledger for some reason.

14   This is about potential subsequent

15 distributions. It could have taken place

16 either -- it could have been executed either

17 before or after the initial distribution. I

18 think either of those are consistent with

19 this. And I don't know from my own knowledge

20 which of those two things were the case.

21   I don't read the anticipated

22 distribution to mean that it didn't happen

23 yet. Because there would be no need to come up

24 with an agreement about what would happen in

25 something that had already happened. The

158

1   concern was what would happen in this future.

2   So the fact that this talks about subsequent

3   distributions may just be that that's what

4   Britto was concerned about.

5   Again, I'm speculating based on my

6   knowledge and the time period and what the

7   document says.

8   MR. DANIELS: So I guess I'm trying

9   to understand.

10   What type of distribution do you

11 think had taken place at the time of this

12 agreement?

13   MR. CERESNEY: If you know.

14   THE WITNESS: I don't know. I know

15 they anticipated a distribution where they

16 would each take from the Genesis account and

17 then they would gift -- each gift eighty

18 percent of what they had taken to the company.

19 And I know that this agreement was about

20 concerns about subsequent distributions. But

21 it could have also included --

22   MR. DANIELS: In the first point

23 here it also says, "The founders agree that

24 eighty percent of all Ripple credits shall be

25 allocated to the company."

159

1   THE WITNESS: Yes.

2   MR. DANIELS: Is that what you are

3   referring to in terms of eighty percents

4   distribution to the company?

5   THE WITNESS: Yeah.

6   MR. DANIELS: That seems like future

7   distribution; is that correct?

8   THE WITNESS: I don't read it that

9   way.

10   MR. CERESNEY: Bottom line, guys, he

11   didn't see this contract at the time. He

12   doesn't -- you are asking him to interpret it.

13   I mean, I -- you know, at some point, this

14   goes too far.

15   THE WITNESS: But honestly, I

16   don't -- I don't -- I don't know. I can read

17   this -- I can read this either way. And I

18   don't know which way it happened.

19   MR. CERESNEY: We all can read it.

20   THE WITNESS: You can read "shall"

21   meaning it's something that's going to happen

22   subsequently. You can read "shall" as in it

23   will stay the case and already is. I don't

24   know.

25   MR. CERESNEY: I don't think he's

160

```
 1 │  the witness to tell you.
 2 │       Q    Was there any discussion about you
 3 │  getting any tokens?
 4 │       A    No, there was not.
 5 │       Q    Why not?
 6 │       A    You would have to ask Jed McCaleb
 7 │  that.
 8 │       Q    Did you ever ask him?
 9 │       A    I found out about the distribution
10 │  after it occurred.  And there were some
11 │  discussions that I had with Jed and others
12 │  about me getting some of the tokens.  But it
13 │  never happened.
14 │       Q    Did you ask him for some of the
15 │  tokens?
16 │       A    There were conversations that I had
17 │  with Arthur, Jed and Chris about whether I
18 │  would get some of the tokens.  But it never
19 │  happened.  I mean, obviously not until much
20 │  later.
21 │       Q    Was it --
22 │            MR. CERESNEY:  Hold on.  The
23 │  discussions happened much later, is what you
24 │  are saying?
25 │            THE WITNESS:  Right.  Well, both the
```

161

1   discussions happened and any tokens that I did

2   get. You know, the ones that you have, did

3   happen later as well.

4   Q   So those initial discussions you are

5   talking about, about getting some tokens, when

6   did the -- when were the first conversations?

7   A   I -- I believe that would have been

8   around -- it would not have been until around

9   early 2013. But that -- that's -- I can -- I

10 can place in it in time that we were in a

11 Bitcoin conference, I think in San Jose. I

12 think it was a 2013 conference. I can't place

13 it in time better than that.

14   Q   Did you ask them for XRP tokens?

15   A   I did.

16   Q   How many?

17   A   We did not get down to specific

18 numbers.

19   Q   Generally? Percentage?

20   A   I think -- I think the order of

21 magnitude might have been something like ████

22 ████████████████████ or so. But we didn't

23 get -- we -- we didn't get to real negotiation

24 at that time.

25   Q   What was their response?

[1/30/2020 10:05 AM] Schwartz, David Inv.Test. 1.30.2020

162

1   A   At the time, the company was really

2 focused on other things that it was doing.

3 The response was kind of like this wasn't the

4 best time to kind of try to renegotiate.

5 Things didn't happen --

6   Q   Did you receive any portion of --

7 any XRP in 2013?

8   A   I -- I don't believe so. I must

9 have received some because I was able to

10 interact with the ledger. And I couldn't find

11 any records to quantify. But I must have

12 received at least a small amount. Because I

13 was able to interact with the ledger, and you

14 can't interact with the ledger without XRP.

15 But I don't have a specific recollection and I

16 wasn't able to locate records.

17   Q   Did you participate in the

18 giveaways?

19   A   I participated in some of the early

20 giveaways. Before the company had a rule

21 prohibiting employees from participating.

22   Q   Outside of the giveaways, were you

23 gifted any XRP.

24   A   I have a recollection of a gift of

25 ███████ XRP. But I was unable to find a

163

1 record of it on the ledger. And it might have

2 been on an earlier ledger that was discarded.

3 I was unable to confirm that that happened. I

4 do have a recollection of it. But I'm not

5 sure if it happened -- you know, where in time

6 that happened. I couldn't find records.

7   Q   If the ledger was discarded. Does

8 that mean you don't have access to that XRP?

9   A   No. I would still have access to it

10 if it was reconstructed on the -- if it was

11 reconstructed with the other balances it would

12 have still been mine. So it's possible that I

13 got one million XRP prior to alleged reset.

14 Can't find the records because they're in a

15 format that nobody can decode anymore and I

16 had them in that initial ledger. That's

17 possible. Again, I searched for records and

18 was unable to find them. That would have been

19 ███████ XRP at a time when it was literally

20 worthless.

21   Q   Going back to Exhibit 77, last

22 paragraph. Talks about Xpring.

23   What is the company's, Xpring,

24 strategy?

25   A   It started out as sort of a venture

[1/30/2020 10:05 AM] Schwartz, David Inv.Test. 1.30.2020

164

1   capital arm to kind of get access to deal flow

2   and see what was going on in space. Possibly

3   make some investments in companies that were

4   interested in building things on the XRP

5   Ledger or otherwise inside the cryptocurrency

6   space. It kind of, over time, has evolved into

7   more of a technical effort around building

8   products that make it easier for people to

9   interact with technologies like Interledger,

10   cryptocurrencies generally and the XRP Ledger.

11   Q   How do those XRP strategies benefit

12   Ripple?

13   A   So I think there's two main ways. So

14   one of them is investments could directly

15   benefit Ripple because you can invest in a

16   company and the value -- you may be able to

17   extract value from the company from either

18   shares or whatever. But I think the -- I

19   think the bigger one is about growing -- about

20   growing the space.

21   I think Ripple's fortunes are tied

22   to the cryptocurrency space pretty tightly.

23   So it's more about encouraging development in

24   the space. I think also, initially, there

25   was -- there was a fear that people -- that

165

1   the sort of ICO craze might lure people who

2   wanted to build interesting projects into

3   building them on platforms that were not very

4   solid. And lure them into getting locked into

5   a platform that wasn't good technically and it

6   would lead them to fail. This would kind of

7   be a way of encouraging them to adopt

8   platforms that were more open, such as in a

9   ledger.

10   Q   Does Xpring encourage alternate use

11   cases of XRP outside of payments?

12   A   That's definitely one of the things

13   that we do.

14   Q   Do you have any involvement with any

15   Xpring initiatives?

16   A   I do.

17   Q   What is your involvement?

18   A   Ethan Beard is the head of Xpring. I

19   meet with him frequently and several of the

20   technical leaders inside the project, and

21   provide assistance with technical decisions

22   that they make in development of the software

23   that they're producing.

24   Q   Are they -- is Ripple currently

25   developing software that could use XRP outside

166

1   the payments context?

2   MR. CERESNEY: Ripple itself or

3   other entities that Ripple --

4   MS. WAXMAN: Ripple itself.

5   A   We are developing products --

6   software products that would be useful for

7   people who are doing that. Like that would

8   enable them to more easily access technologies

9   like the Ripple ledger and Interledger. So I

10   don't think a flat yes or no answer is really

11   responsive.

12   Q   Can you give me an example of one of

13   those products?

14   A   Yes. One would be what we actually

15   call the Xpring platform. Which is

16   essentially a tool kit for interacting with

17   technologies like Interledger and the XRP

18   Ledger. That would enable people -- whatever

19   use case they were pursuing, it would be

20   easier for them to develop software.

21   One of the biggest things that we

22   heard from the industry people was that people

23   wanted to build on top of blockchain

24   technologies, but it was very difficult.

25   There were only a limited of people with deep

167

1   expertise in the blockchain space. So if you

2   have to hire ten blockchain experts to do

3   anything with blockchain, that tremendously

4   limits the possibility for adoption of

5   technologies like Interledger or the XRP

6   Ledger and even Bitcoin and Ethereum.

7   The idea was to build a sort of

8   layer in the middle that would allow you to

9   interact with a blockchain without having to

10 have blockchain expertise.

11   Q   Can you put a native token on the

12 XRP Ledger just like if you wanted to issue an

13 ICO token on the Ethereum ledger?

14   A   You can.

15   Q   Do people do that?

16   A   Not very much. I've seen it happen,

17 but not very much. They tend to be very

18 short-lived. Typically, what you'll see is

19 you'll see XRP, which is like the native

20 token, you'll see assets pegged to either

21 digital assets or fiat issued assets that

22 trade on the decentralized exchange.

23   And then you will see some of these

24 sort of quasi-native issued assets that are

25 kind of digital asset-like that don't live

168

1   anywhere else. I don't believe there have

2   been any successful efforts to do that though.

3   Nothing stops you from doing it. I just don't

4   think people have had particularly much

5   interest in doing so.

6   Q   Can you turn to page twenty.

7   A   Of which exhibit?

8   Q   Of the --

9   A   This one, Exhibit 76?

10   Q   Yeah.

11   A   Okay.

12   Q   The middle post. Post number

13   forty-five.

14   A   Yes.

15   Q   It talks about founders' XRP getting

16   sold.

17   A   Yes.

18   Q   It says, "We definitely have had a

19   problem with founders' XRP getting sold.

20   We've worked extensively to get that locked

21   up."

22   A   Yes.

23   Q   Why would you -- why did you want to

24   do that?

25   MR. CERESNEY: Why did you want to

1   lock up? When you say "do that," you mean to

2   prevent those sales?

3   Q   Why did have you want to prevent XRP

4   from getting dumped?

5   MS. WAXMAN: Thank you.

6   A   There were a variety of reasons. But

7   one of them was with a -- if someone had a

8   very -- so Jed had approximately nine billion

9   XRP. Which would be enough to sort of

10   saturate the ledger with spam for the

11   foreseeable future, to be able to -- remember

12   the use case of XRP, back at that early time

13   when this happened, was that it was sort of

14   fuel for your transaction.

15   And the idea was that if you were a

16   legitimate user, you would be able to put the

17   actual economic value of your transaction --

18   it might be extremely small, it might be a

19   tiny fraction of -- a tiny, tiny fraction of a

20   penny, but you could put that into the

21   transaction fee.

22   Whereas, if somebody else had an

23   enormous amount of XRP that they had been able

24   to acquire at a very low cost, even if their

25   transactions had much less economic value than

[1/30/2020 10:05 AM] Schwartz, David Inv.Test. 1.30.2020

170

1   yours, or none at all, they could produce

2   hundreds of millions or even billions of them

3   and render the ledger unusable.

4   Q   Okay. But would there be another --

5   would massive selling have an effect on the

6   price of the XRP as well?

7   A   It would. I don't think that was

8   the primary concern at the time it happened.

9   Q   Was that a concern at all?

10   A   I think it probably is fair to say

11   it was a concern.

12   Q   Was that a concern to other XRP

13   purchasers --

14   MR. CERESNEY: Hold on.

15   Q   -- in the market?

16   MR. CERESNEY: So you're asking him

17   whether other purchasers in the market would

18   be concerned?

19   MS. WAXMAN: Yes.

20   Q   I'm asking that because I know that

21   there are lots of comments on a lot of forums

22   and I know that you participated in a lot of

23   forums.

24   A   I did see people who were concerned

25   about it at the time, expressing their

171

1   concern. Jed made a public announcement that

2   he was going to -- I think he probably even

3   used the word "dump." That he was going to

4   dump all of his XRP. And certainly there were

5   people who expressed concerned for a variety

6   of reasons.

7   Q   Going back to the original question,

8   were you concerned that that selling was going

9   to have a negative impact on the price of XRP?

10   A   At that time, the primary concern

11   was that it would render the XRP Ledger

12   essentially useless. But I -- I will say a

13   price -- we were not -- I'm trying to think of

14   a way to precisely describe what happened.

15   The primary concern was the damage

16   to the utility of the ledger. There was a

17   secondary concern about the impact on price.

18   Q   That concern about impact to the

19   price, over what period of time was it?

20   A   I -- I don't recall when Jed made

21   that announcement. It would have been shortly

22   after Jed made that announcement.

23   Q   Is there still a concern now that

24   Jed could sell massive amounts of XRP and have

25   a negative impact on price?

172

```
 1       A    I believe we've reached a settlement

 2    with Jed that --

 3            MR. CERESNEY:  Why don't we stop,

 4    leave it at that.  The settlement about his

 5    sales.  That's what you were going to say,

 6    right?

 7            THE WITNESS:  Right.

 8       A    There's no further concern because

 9    there is a settlement in place.

10       Q    Is that what you are referring to in

11    the first paragraph, "We've worked extensively

12    to get that locked up"?

13       A    Yes.

14       Q    Okay.  So you were referring to the

15    settlement.

16            Did the company enter into

17    settlements are other founders regarding

18    sales, their sales of XRP?  Or anyone else?

19       A    I think there was an agreement with

20    Arthur Britto, but I don't know the details.

21    I seem to remember someone mentioning that

22    that either existed or was in the works.  But

23    I don't know of anything else.

24       Q    So the post is accusing Ripple of

25    dumping XRP.  And then the last paragraph
```

[1/30/2020 10:05 AM] Schwartz, David Inv.Test. 1.30.2020

173

1   says, "There were actually two cases where

2   we -- where there was attempted dumping that

3   you can you could make a reasonable argument

4   that we had some responsibility for."

5   You are talk about Ripple?

6   A   I believe I am. Yes.

7   Q   "And in both cases, we immediately

8   took that XRP off the market and sought

9   compensation from the parties."

10   What two cases are you referring to?

11   A   I'm not absolutely sure what I was

12   referring to. I'm almost positive that one of

13   them was Jed's initial announcement. The

14   other one may have been a subsequent act by

15   Jed or someone related to Jed. Or something.

16   Someone who Jed had given a large amount of

17   XRP to. Something in that line. And actually,

18   now that I think about it we had sort of

19   more -- "we" is sort of more broad than that.

20   Because "we" would include also the founders

21   outside of their capacity. Outside of their

22   capacity as, you know, employees of Ripple and

23   people connected with Ripple.

24   Q   When was the announcement by Jed?

25   A   I do not recall the date.

[1/30/2020 10:05 AM] Schwartz, David Inv.Test. 1.30.2020

174

1   Q   What did the announcement say?

2   A   My recollection is that Jed

3   announced that he was going to dump or sell

4   all of his XRP very rapidly.

5   Q   Did he say why?

6   A   My -- my recollection is that he

7   expressed disillusionment with the project.

8   But I don't recall specifically.

9   Q   Why was he disillusioned with the

10   project?

11   A   My -- so the project -- I think it's

12   because we had sort of pivoted away from the

13   giveaway and grass roots adoption strategy.

14   Q   What was the pivot to?

15   A   I'm trying to think what that -- I

16   think that would have been when the pivot was

17   to do the sort of enterprise payment

18   international settlement strategy. It might

19   have been earlier than that.

20   Q   And I don't know if we went over

21   this, but why did the company pivot to that

22   strategy?

23   A   Giveaways were not -- were not being

24   effective. And when we went to -- the gateway

25   strategy was working successfully with like

175

1   cryptocurrency companies and companies that

2   were really interested in experimenting with

3   new technology just for the sake of

4   experimenting with new technology. But when

5   we went to companies like financial

6   institutions and banks, we got a lot of

7   pushback that there wasn't a good fit of the

8   tech -- of public blockchain to the use case.

9   Q   Was this pivot before or after Brad

10   Garlinghouse came on board?

11   A   My recollection is that it was

12   before. But you know what, I might be

13   thinking before he became CEO rather than

14   before -- because he initially joined as COO.

15   And his role kind of grew in that time. So

16   it's -- I'm pretty sure it was before he

17   became CEO. I'm not sure if it was before he

18   joined the company.

19   Q   What was the timing in relation to

20   the company's settlement with the DOJ and

21   FinCEN?

22   MR. CERESNEY: Which was in 2015,

23   right?

24   MS. WAXMAN: Yeah.

25   A   I think we were well into that

[1/30/2020 10:05 AM] Schwartz, David Inv.Test. 1.30.2020

176

1   strategy before the settlement. Because I

2   remember there was concern at the time that

3   the settlement might impact our relationships

4   with partners that we had acquired as part of

5   that sort of enterprise payment strategy.

6   Q   Was Jed disillusioned for any other

7   reason?

8   A   I would have to speculate about

9   Jed's motives. Not that he communicated to

10 me.

11   Q   What was your relationship with him?

12   A   It was quite strained at that time.

13 Shortly around that time, he announced

14 ██████████ Which was sort of a clone of Ripple

15 and a competing project that essentially

16 copied all of our -- all the work we had done.

17 I mean, it's a public -- it's open source. He

18 certainly could do that. But I was -- I would

19 describe myself as not happy.

20   Q   What were -- why did Jed leave

21 Ripple? What were the circumstances in

22 connection with his departure?

23   MR. CERESNEY: As you understood it.

24   A   From what I saw, Chris and Jed's

25 relationship broke down. There was

177

1   disagreement over the direction that the

2   company should go. There was disagreement

3   over whether Chris should remain as CEO. And

4   then the board voted to retain Chris as CEO

5   and essentially to reject some of the

6   suggestions that Jed had made, and he left.

7   Q   Was there a disagreement as to

8   whether the founders should return their XRP?

9   A   Not to my knowledge.

10   Q   Did ████████ ever make a public

11 demand or publicly disclose that he had wanted

12 the founders to return the XRP to the company?

13   A   I do remember him making that

14 statement.

15   Q   Why did -- why does -- does ████

16 believe that the founders took the XRP from

17 the company?

18   A   He -- he stated that. I don't know

19 that he believes it. He has stated that he

20 believes it, but I find that very difficult to

21 believe. Because I know he was involved in

22 conversations about who -- about precisely

23 about Ronald (sic) von NotHaus issue.

24   It may have been Chris that spoke to

25 him, but I mean, I know that conversation -- I

178

1   know those conversations took place. So it

2   just seems odd to me that he would suddenly

3   have taken a position that was inconsistent

4   with what I think we understood.

5   Q   The distribution was directly

6   related to that Liberty Dollar case?

7   A   I think that was one of the concerns

8   that drove the basic parameter that -- it sort

9   of drove the timeline of having to have a

10   functional ledger prior to the creation of the

11   company. And having to have the tokens

12   functional and distributed prior to the

13   creation of the company. There was also

14   conversation, I think, about whether investors

15   would get tokens. And the idea was that that

16   would create liability that -- investors don't

17   want liability. Right. They want

18   participation and the growth of the company.

19   That would create liability. It was very

20   clearly decided at the time that just wasn't

21   something that could happen.

22   Q   Are you talking about liability --

23   was it only liability for perhaps the token

24   being counterfeit or liability in general?

25   A   I would say our biggest concern was

[1/30/2020 10:05 AM] Schwartz, David Inv.Test. 1.30.2020

179

1 the counterfeit issue because that was the

2 biggest one at the time. I think there were

3 other -- I think other major issues included

4 consumer protection laws and the possibility

5 of state laws that we were not aware of.

6   Q   Also to include concern about

7 Federal Securities laws?

8   A   I don't believe that that was

9 considered a significant concern at that time.

10 I think if we had made a list of all of our

11 concerns, it would have gone on that list. It

12 would not have even gone in the top three.

13   Q   If you go to page -- hold on one

14 second -- page five of that, post number ten.

15   A   I see that.

16   Q   My question is, what did the team of

17 engineers at Ripple Labs do to one, maintain

18 the ledger, the XRP Ledger?

19   A   We continued to work on improving

20 the functionality, stability and security of

21 the XRP Ledger software throughout that time

22 period.

23   Q   Can you tell me how many engineers

24 at Ripple are responsible for doing that?

25   A   I think it grew from initially

180

1   about -- well, initially it was just me. And

2   it grew to probably about fifteen or sixteen

3   now.

4   Q   Can you tell me the experience of

5   those engineers and what sorts of background

6   they have?

7   A   It's tremendously varied. All of

8   them except for -- all of the ones who are

9   actually writing codes, except for one, are

10 primarily C++ developers. And they have a

11 variety of experience, you now, in fields like

12 enterprise software development distributed

13 systems, computer security. We've tried to --

14 tried to keep their skill set very varied to

15 make sure that we have expertise in all areas.

16   Q   Do they work on maintaining the XRP

17 Ledger full-time?

18   A   They work on maintaining the XRP

19 Ledger software. Most of them full-time.

20   Q   Do they also work on developing the

21 software?

22   A   They work on -- they work on finding

23 bugs, adding new -- designing and adding new

24 features. Quality control and submissions

25 from other people. That kind of thing.

1   Q   What new features have been added to

2   the ledger since 2013?

3   A   So there's -- there's obviously a

4   very long, long list of features. I know I'm

5   going to forget some of the big ones.

6   So multi-sign is one, which allows

7   you to have multiple people who manage an

8   account instead of just one person. So you

9   can have let's say two or three. We added

10   something called "payment channels," which

11   enables people to form transactions off the

12   ledger. So if you want to perform let's say a

13   thousand transactions per second, you don't

14   want all of them to be on the ledger. This

15   lets you have the security of on-ledger

16   transactions without having to submit them all

17   to the ledger.

18   We have the feature called "checks,"

19   which enables you to control how you receive

20   funds. On most cryptocurrency systems, people

21   can just send you money. It sounds like a

22   good thing, but if you have legal obligations

23   to return the funds that you haven't earned,

24   it can be a problem if you receive funds that

25   you didn't want to receive.

182

1   Q   Air drops?

2   A   Exactly.

3   Q   Similar to that?

4   A   Yeah. I guess that's another

5 problem. You just get an enormous amount of

6 valueless assets. That you then have to try

7 to figure out what to do with them. Are there

8 tax implications? It can be quite a mess. It

9 seems nice to receive money, but it can be a

10 burden. Particularly for financial

11 institutions.

12   There were a number of security

13 features that we added in response to various

14 different type things that were defects or

15 they affected usability, performance,

16 security. There was a complete rewrite of the

17 payment engine because there were some issues

18 with it, in certain cases, not behaving the

19 way people expected it to. Better

20 instrumentation so that you could tell what it

21 was doing. That kind of thing.

22   Q   Did these features improve the speed

23 of the ledger?

24   A   Some of them -- some of them did.

25   Q   Did they improve the scalability of

1   the ledger?

2   A   Yes.

3   Q   Were they features that were

4   developed by Ripple engineers in-house?

5   A   Many of them were.

6   Q   Just what is your particular

7   involvement in that whole process that you

8   just described?

9   A   So initially, I did a significant

10   fraction of the coding. Over time that

11   evolved more into guidance, advice. You know,

12   working on more of the design level and

13   technical details. And now it's become much

14   more sort of hands-off. But you know, when

15   they have technical questions, they seek me.

16   Q   When the XRP Ledger was created, was

17   it decentralized?

18   A   When it was first created, no.

19   Q   Why not?

20   A   It had the capability to be run in a

21   decentralized way. That was a very important

22   design idea. If you define

23   decentralization -- people define

24   decentralization in many different ways. But

25   the one that I think is paramount is, does it

184

1   have a head that if you cut the head off, the

2   organism dies? When you just create something

3   and you're the only person who has it and uses

4   it, if you go away, so does that thing. It's

5   not until it's at least sort of in public

6   circulation that other people have an

7   opportunity to continue the efforts, that I

8   think you can fairly characterize it as

9   decentralized.

10   Q   At what point would you characterize

11   a XRP Ledger as decentralized?

12   A   It's a gradual continuum over time.

13   I think one -- one -- one place you can put a

14   stake in the ground is when the -- when the --

15   when the -- that's -- it's very tricky to put

16   a stake in the ground. Obviously if it's not

17   functional, you can't really -- it doesn't

18   really do any good to describe it as

19   decentralized. Because what are you

20   decentralizing? So I think one minimum

21   criteria is that it be functional. But after

22   that, it kind of gets to be a continuum.

23   Where again, it becomes a line drawing

24   exercise.

25   Q   When it was released for the public,

[1/30/2020 10:05 AM] Schwartz, David Inv.Test. 1.30.2020

185

1   when it became live, was it decentralized

2   then?

3   A   It wasn't decentralized in the sense

4   that in the short-term, a single party ran the

5   hardware on which the ledger operated. But it

6   was decentralized in the sense that had we

7   stopped, somebody else could have taken over.

8   Again, it gets to be a line drawing exercise

9   of what do you think is important to

10   decentralization. And how -- how -- how much

11   does sort of short-term versus long-term

12   matter.

13   Q   At some point, did the company make

14   it a priority to make the ledger more

15   decentralized?

16   A   Yes.

17   Q   What did they do?

18   A   Over a period of time, there were a

19   number of different things that we made. From

20   technical changes to the software to make it

21   more resistant to different attack models that

22   might be associated with centralization. To

23   try to get more people to run validators. To

24   try to get people to add to the list of

25   validators that they were willing to listen

186

1   to. Validators that weren't run by Ripple

2   Labs.

3   There were a number of efforts

4   related -- that related to sort of improving

5   the way people would consider it decentralized

6   by various different metrics. I think you

7   could even put efforts to reduce the amount of

8   XRP we held because some people think that

9   distribution is sort of an important parameter

10   to decentralization.

11   Q   How would you reduce the number of

12   XRP that you hold?

13   A   Well, the initial strategy was

14   giveaways. And then later, it became more

15   like partnerships. And then sales were part

16   of that. And that's still sort of a challenge

17   for us, to figure out how to -- how that's

18   going to happen.

19   Q   Because you still own quite a bit?

20   A   Right. There's no -- there's no

21   obvious strategy to get that number down in

22   any sort of short time frame. Other than just

23   dumping.

24   Q   Could you give it away?

25   A   It's very difficult. You can, but

187

```
 1    what happens is that people will tend to try

 2    to gain the giveaway to the extent of the

 3    value of the thing that you give away.  If you

 4    give something away that's worth $5.00,

 5    someone will spend $4.50 to try to get it.

 6    And we had some bad experiences with giveaways

 7    after the token had value that resulted in bad

 8    actors doing bad things.  And it turns out to

 9    be a lot more difficult than you might think

10    to do that.

11         Q    Is there a benefit to having

12    everyone follow Ripple's UNL?

13         A    The benefit is, is that it saves --

14    it saves effort.  It's the simplest thing to

15    do.  It doesn't require any more effort on

16    your part.  As long as that gets you the

17    results you want, people will probably do it

18    until it doesn't get them the results they

19    want.  And then they may be willing to expend

20    effort to do something else.

21         Q    How many validators on the UNL does

22    Ripple control?

23         A    That has changed over time.  I think

24    right now, it's five.  But I'm -- I'm not sure

25    of the exact number at this time.
```

188

1   Q   Five out of how many?

2   A   So there's -- I would have to

3   double-check the number. But I think there's

4   approximately thirty on the UNL that Ripple

5   recommends. And there's approximately a

6   hundred twenty validators total. Both

7   including ones that Ripple recommends and not,

8   ones that Ripple does not recommend.

9   Q   Is it more likely that the consensus

10   process will work if they use the recommended

11   UNL?

12   A   It will work as long as there's

13   substantial agreement on what the UNL is. If

14   you think that a significant fraction of

15   people are following our recommendations, then

16   it works better if you follow the

17   recommendations at least approximately.

18   There's a certain amount of sort of wiggle

19   room that you get in the protocol where it

20   still works just fine.

21   Q   I want to talk about --

22   MR. CERESNEY: Actually, before you

23   start a new topic, we've been going about an

24   hour twenty.

25   MS. WAXMAN: Sure. That's fine. We

189

1   are off the record at 2:57.

2   (A brief recess was taken.)

3   MS. WAXMAN: We are back on the

4   record at 3:09.

5   Q   Mr. Schwartz, earlier today we were

6   talking about how the company shifted focus,

7   they pivoted to using XRP for payments,

8   correct?

9   A   Yes.

10   Q   How did the company set out to

11   execute this new strategy?

12   A   In the first version of that

13   strategy, the sort of gateway strategy, the

14   idea was that the transactions would take

15   place on the ledger and XRP would provide

16   liquidity between issued assets. In the later

17   versions of that strategy, XRP liquidity would

18   be used to facilitate international

19   transactions that would primarily -- or the

20   payment itself would take place off the

21   ledger.

22   Q   When was the later version of the

23   strategy?

24   A   I would say late 2014, early 2015.

25   But it may be a little bit -- it may have been

190

1   a little earlier than that.

2   Q   And how did the company try to

3   execute that later strategy?

4   A   The company started talking

5   primarily to banks about how they could use

6   public ledger technology to facilitate

7   particularly international payments. That's

8   where sort of the pain was. We discovered

9   that performing the transactions on a public

10   ledger, was not a good fit for their use case.

11   So we started to look at how we could build a

12   payment system that met their requirements,

13   they could still interface with public

14   ledgers.

15   Q   Did you develop -- did you start to

16   develop a product that would do that?

17   A   Yes. At the time, it was called

18   Ripple Connect. It's what eventually became

19   xCurrent.

20   Q   Does xCurrent use XRP?

21   A   XCurrent doesn't -- it doesn't care

22   how the payment is settled. You could use XRP

23   to settle it, but you don't have to.

24   Q   If you use XRP, is the product now

25   called xRapid?

191

1   A   Yeah -- so the terms did become a

2   bit confusing. XRapid was a module that would

3   interface with xCurrent as a settlement engine

4   that would perform the settlement using XRP.

5   Q   When did development of xRapid

6   begin?

7   A   My recollection is that it was 2017.

8   But I'm not certain.

9   Q   Prior to that time, could XRP used

10 as a settlement only on the ledger?

11   A   That's correct.

12   Q   Were banks using the ledger?

13   A   Banks were testing the ledger. They

14 weren't actually using it for live payments,

15 as far as I know.

16   Q   If you use xRapid for payments, do

17 the -- does the exchange happen on ledger or

18 off ledger?

19   A   The exchange between XRP and fiats,

20 that takes place off ledger.

21   Q   Was that a benefit?

22   A   You could see it as a benefit for

23 two reasons. And I think people who -- who

24 looked at the product did consider it a

25 benefit for two primary reasons. One is, at

1   that time, the off-ledger exchanges were

2   somewhat more mature. They were more -- they

3   were easier for enterprise customers to use.

4   They had better on ramps and off ramps to the

5   financial system. They had customer service

6   representatives that you could interact with.

7   It was a better experience for enterprise

8   customers.

9   I think the other reason was every

10   transaction that you make on a public ledger

11   is public. And I think there was a concern at

12   that time, I think to some extent still today,

13   that you wouldn't want to reflect every

14   consumer enterprise payment on a public ledger

15   because that would reveal too much information

16   about how you were moving money.

17   Q   Was xRapid a way to increase the use

18   of XRP for payments?

19   A   Yes.

20   Q   Was xRapid geared toward banks?

21   A   Not really. I think they were

22   always a potential customer. But I think by

23   the time we implemented -- we always had the

24   vision that banks might use xRapid or

25   something like it. But I think at the time

193

1   that we developed xRapid, we realized that

2   remission-type flows that would typically be

3   handled by companies like MoneyGram, were a

4   better initial target. And so I think the

5   product was more aimed towards a particular

6   subset of the problem.

7   Q   Why were companies, payments service

8   providers like MoneyGram better suited for the

9   product as opposed to banks?

10   A   There were a variety of reasons. One

11   of them is those payments tend to be smaller.

12   If you imagine remittance payments, they tend

13   to be between, let's say $300.00 and $600.00

14   or so in value. Rather than an enterprise or

15   business to business payment that might be

16   much larger, so you don't need as much

17   liquidity to make it work.

18   They tend to pay higher rates. Both

19   because the amounts are small and because the

20   corridors have lower volume. So for example,

21   a remittance to Mexico would typically pay a

22   higher fee than let's say a payment between

23   the U.S. dollar and the euro. And also, those

24   companies are very concerned about the cost of

25   their payments.

194

1   Banks typically, unless they're

2   banks that are specifically focused on

3   payments, they don't see payments as

4   necessarily core to their business. It's just

5   something that customers expect them to do.

6   They're more concerned with things like assets

7   under management and loans. And so it's

8   harder to motivate them by saying, "We'll make

9   your payments better." Because that's not as

10 core to their business, they don't respond as

11 well to that type of product.

12   Q   So a PSP is more better market fit,

13 sounds like?

14   A   I think we thought if we couldn't

15 succeed with PSPs, we couldn't succeed

16 anywhere. So we would try where we thought

17 the fit was best and see how that went. And

18 we were flexible to update the strategy, you

19 know, if that turned out not to be the right

20 decision.

21   Q   When did xRapid first become

22 commercially available? We talked about when

23 it was in development. When did it come out

24 of development and actually be used?

25   MR. CERESNEY: Just one thing. We've

[1/30/2020 10:05 AM] Schwartz, David Inv.Test. 1.30.2020

195

1   already determined his recollection of dates

2   is not ideal.

3   MS. WAXMAN: I actually don't have a

4   document that could help here. I wish I did.

5   A   My recollection is late 2018, early

6   2019. But it could have been even as much as

7   a year before that.

8   Q   Actually, I do.

9   I know there was a press release in

10   October of 2018 where the company announced

11   that xRapid was commercially adopted.

12   A   That seems to fit my recollection

13   best.

14   Q   Can you walk us through an xRapid

15   transaction?

16   MR. CERESNEY: Just one thing. He --

17   we'll see if he can do this. But he's not

18   really a -- the product guy. He obviously has

19   lots of knowledge. He may be able to describe

20   this. But you know --

21   Q   I'm looking for a very high

22   overview.

23   A   I can walk you through it

24   technically. Technically, the payment would

25   originate -- there's a lot of variety, but

196

1   I'll pick what I think is the most typical

2   instance. And it's a little more reflective of

3   how the product works now than necessarily how

4   it did in the very early days.

5   But the general idea is the payment

6   begins on an xCurrent instance. That's sort

7   of the product that a customer would interact

8   with and they would say, "Hey, I want to make

9   a payment." The xCurrent instance then looks

10   for paths that can make that payment. So it

11   looks for routes, which could be direct

12   settlement. It could be something like

13   correspondent banking O.it could be on-demand

14   liquidity from a product like xRapid.

15   So if you have an xRapid instance

16   that can facilitate that payment, the xRapid

17   instance receives that request for payment and

18   then it tries to determine whether it has the

19   capability to make the time payment. So what

20   it looks at is, do you have enough of that

21   asset that you are spending.

22   Let's say that you are U.S. dollars

23   to Mexican peso. So do you have enough U.S.

24   dollars at the exchange. Then it looks at the

25   exchange rate between U.S. dollars to XRP. It

1   looks at the exchange rate from XRP to Mexican

2   pesos. And the existence of a sort of payout

3   ramp. Because once you have the Mexican pesos

4   at the receiving exchange, you need some way

5   to get them to the recipient of the payment.

6   So if all of those pieces are

7   available, it then sends a quote back to

8   xCurrent. It says, "I can make this payment

9   and this is how much it's going to cost. This

10   is how long it's going to take." It's then up

11   to the individual customer whose xCurrent that

12   is, to decide whether that quote is acceptable

13   to them or not. So their integration software

14   would say, "Okay. This payment is going to

15   cost this much. It's going to take this long.

16   Yes, we like that. Or no, we don't like

17   that."

18   If they say, "No, we don't like

19   that," nothing happens. Not very interesting.

20   If they say yes, that message is routed to the

21   xRapid instance and then the xRapid instance

22   initiates the sequence of the events to make

23   the payment.

24   It sells XRP at let's say U.S.

25   dollar to XRP exchange. It sends the XRP

[1/30/2020 10:05 AM] Schwartz, David Inv.Test. 1.30.2020

198

1   typically on the ledger to a receiving

2   exchange. The receiving exchange -- it then

3   instructs the receiving exchange to make a

4   trade from XRP to Mexican pesos. And then it

5   commands either to the exchange or a payout

6   partner to deliver the Mexican pesos to the

7   recipient of the payment. Once that's

8   complete, assuming nothing goes wrong, it

9   sends an indication back to the xCurrent

10   instance confirming that the payment has taken

11   place.

12   Q   How long does it take from the time

13   the customer accepts the quote to the time

14   that the message is sent back to xCurrent?

15   A   About ninety seconds would be

16   typical. It's quite impressive considering

17   the number of discreet events that have to

18   take place.

19   Q   The software runs certain checks to

20   see if you have enough money.

21   A   A significant fraction --

22   Q   That's the first step, right?

23   A   Yes. A significant fraction of the

24   complexity of developing the product, it's not

25   the case where everything goes right. It's

1   the large number of things that might go

2   wrong, how each one has a unique recovery

3   process to do in that case. When you are

4   building an enterprise product for financial

5   institutions to use, they're very concerned

6   that you cover all of the cases. So the

7   technical capability to do all of those things

8   where nothing goes wrong and having a product

9   that people can actually use for that, there's

10   an enormous goal.

11   Q   And that was why it took so long to

12   develop?

13   A   Yeah, that was one of the reasons. I

14   think another big reason was that last mile.

15   Everything is pretty simple to get to the

16   Mexican pesos, let's say in this example. But

17   you then need to get the Mexican pesos to the

18   recipient somehow. So there needs to be some

19   entity in Mexico that can make that last mile

20   payment. Assuming that the recipient isn't a

21   bank.

22   If it's a remittance -- so that's

23   another interesting sort of downside of the

24   remittance strategy over the enterprise

25   payment strategy. In the enterprise payment

[1/30/2020 10:05 AM] Schwartz, David Inv.Test. 1.30.2020

200

1   strategy, the recipient is typically

2   well-connected to our financial system. So

3   just getting the money into a bank is good.

4   Domestic payment systems are usually good

5   enough to get money from any bank to sort of

6   any company in that country.

7   If your target is an individual,

8   let's say it's a remittance into Brasil or the

9   Philippines, they may need cash delivered over

10 the counter. Or they may have a mobile

11 payment system that isn't well-tied into the

12 country's financial system. So I think one of

13 the challenges that we didn't really

14 anticipate when we adopted the sort of

15 remittance strategy was that that last mile

16 would be very complicated.

17   Q   When you are talking about that last

18 mile, you're talking about the actual transfer

19 from the exchange that exchanges XRP to Mexico

20 into the local currency and that transfer to

21 the customer?

22   A   Correct.

23   Q   Sometimes referred to it as ACH

24 transfer?

25   A   Well, in the United States, it might